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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,215	09/26/2003	Hiroki Yamamoto	500.38802CX1	6839

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EXAMINER

KUGEL, TIMOTHY J

ART UNIT	PAPER NUMBER
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1712

DATE MAILED: 03/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/670,215	YAMAMOTO ET AL.	
	Examiner	Art Unit	
	Timothy J. Kugel	1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/622,480.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>9/26/2003</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

1. Claims 1-4 are pending as filed on 26 September 2003.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file of the parent application 09/622,480.

Information Disclosure Statement

3. The information disclosure statement filed 26 September 2003 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Drawings

4. The drawings, particularly Figure 6, are objected to under 37 CFR 1.83(a) because it fails to show any detail. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet,

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and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

5. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

6. The cross reference to the related application should be amended to reflect that Application 09/622,480 has issued as US 6,667,946.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 1-4 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for compositions comprising two phases, does not reasonably provide enablement for compositions comprising more than two phases.

The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

The claims refer to a composition having N phases where N is an integer of 2 or more, but the specification, while referring to phases having multiple components, only discloses compositions comprising a single continuous phase or matrix phase and a single dispersed or particle phase. Apparently the term "phase" has been given two meanings, the conventional meaning of "the type of state of a system, such as solid, liquid, or gas" and as a synonym for "component". This is illustrated in the disclosure, which teaches that "The continuous phases are phases represented by such a matrix phase and are phases all of which are continuous and exist not being independent. The continuous phases exist so as to disperse the discontinuous phases" (Page 4 Lines 20-23), which has been interpreted as meaning "The continuous phase is comprised of a mixture of components forming a matrix which exists to disperse the components of the discontinuous phase." While the specification discloses a number of components of the composition (Table 1), it does not provide direction or working examples as to how these components exist in more phases than a single continuous and a single discontinuous phase; therefore, one of ordinary skill in the art would require undue experimentation to make or use the invention based on the content of the disclosure.

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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10. Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the term, where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term “compound” in claim 1 is used by the claim to mean “composition”, while the accepted meaning is “a substance whose molecules consist of unlike atoms and whose constituents cannot be separated by physical means.” The term is indefinite because the specification does not clearly redefine the term. Further, the term “phase” in claim 1 is apparently used by the claim to mean both “component” and “the type of state of a system, such as solid, liquid, or gas”, while the accepted meaning is only “the type of state of a system, such as solid, liquid, or gas.” The term is indefinite because the specification does not clearly redefine the term.

Regarding claims 1 and 2, the inclusion of a term within parentheses renders the claim indefinite because it is unclear whether the included term is part of the claimed invention.

For the purpose of examination, claim 1 was construed to recite, “A composition comprising two phases and at least one element selected from the group consisting of

Co, Ti, V, Cr, Mn, Fe, Ni, Si, Pb, Bi, and Al, wherein at least one phase is continuous, and at least one phase is discontinuous.”

For the purpose of examination, claim 2 was construed to recite, “The composition of claim 1, wherein the refractive index of the composition changes when an incident light enters in accordance with: $n = n_0 + n_2 I$, wherein n is the absolute value of the observed refractive index, n_0 is the refractive index when no incident light has entered, I is the intensity of the incident light and n_2 ranges from greater than $1.0 \times 10^{-9} \text{ m}^2/\text{W}$ to less than $1.0 \times 10^{-7} \text{ m}^2/\text{W}$.”

Regarding claim 4, it is unclear what the term ‘an oxide’ means as the claim appears to be directed to a mixture of oxides.

For the purpose of examination, claim 4 was construed to recite, “The composition of claim 1 further comprising a mixture of oxides comprising 60 to 95 weight percent CoO and at least one oxide comprising an element selected from the group consisting of Si, Ti, Al, Pb and Bi.”

Double Patenting

11. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

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A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

12. Claims 1-4 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 10, 11, 13, 14 and 16 of US 6,667,946 (Yamamoto hereinafter).

Although the conflicting claims are not identical, they are not patentably distinct from each other because Yamamoto claims an optical information recording medium comprising a composition that fully embraces the composition of the instant claims, including disclosing the CoO content of the oxide component as claimed (Disclosure Column 9 Lines 14-17, See *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

13. Claims 1-3 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/750,882.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the copending application claims a magnetic recording medium comprising an array of nanoparticles containing at least one element selected from the group consisting of Fe, Co, Ni, Mn, Sm, Pt and Pd and an organic compound located between the array of nanoparticles, which reads on the composition of instant claim 1 in an anticipatory manner with the organic compound serving as a continuous phase and the nanoparticles serving as the discontinuous phase.

Pertaining specifically to claims 2 and 3, since the copending application claims the same composition as instantly claimed, one of ordinary skill in the art at the time the invention was made would have expected that the change in refractive index in response to incident light of the copending composition would inherently be the same as claimed.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

14. Claims 1-3 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 5 of copending Application No. 10/832,310, currently allowed.

Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 5 of the copending application claims a film containing at least two kinds of metals selected from the group consisting of Co, Cr, Ni, V, Mn, Ti, Zr, Hf and Ta, which reads on the composition of instant claim 1 in an anticipatory manner with the film serving as the continuous phase and the metals serving as the discontinuous phase.

Pertaining specifically to claims 2 and 3, since the copending application claims the same composition as instantly claimed, one of ordinary skill in the art at the time the invention was made would have expected that the change in refractive index in response to incident light of the copending composition would inherently be the same as claimed.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102 and/or 35 USC § 103

15. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 5,393,465 (Drozdyk hereinafter).

Drozdyk teaches a dispersion of dielectric glass, inorganic filler—including Al_2O_3 —and cobalt oxide—both CoO and Co_3O_4 dispersed in an organic medium (Abstract, Column 1 Lines 14-17, Lines 47-57 and Column 1 Line 61 – Column 2 Line 22).

18. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 4,579,807 (Blonder hereinafter).

Blonder teaches an optical medium including at least two phases, at least one being continuous and at least one being discontinuous (Abstract, Column 2 Lines 19-22) comprising indium, tin, copper, lead or aluminum (Column 5 Lines 1-4).

19. Claims 2 and 3 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Drozdyk.

Drozdyk teaches a dispersion of dielectric glass, inorganic filler—including Al_2O_3 —and cobalt oxide—both CoO and Co_3O_4 dispersed in an organic medium (Abstract, Column 1 Lines 14-17, Lines 47-57 and Column 1 Line 61 – Column 2 Line 22).

Since Drozdyk teaches the same composition as claimed, one of ordinary skill in the art at the time the invention was made would have expected that the change in refractive index in response to incident light of the Drozdyk composition would inherently be the same as claimed.

Where applicant claims a composition in terms of a function, property or characteristic and the composition of the prior art is the same as that of the claim but the function is not explicitly disclosed by the reference, the examiner may make a rejection under both 35 U.S.C. 102 and 103. "There is nothing inconsistent in concurrent rejections for obviousness under 35 U.S.C. 103 and for anticipation under 35 U.S.C. 102." *In re Best*, 562 F.2d 1252, 1255 n.4, 195 USPQ 430, 433 n.4 (CCPA 1977).

20. Claims 2 and 3 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Blonder.

Blonder teaches an optical medium including at least two phases, at least one being continuous and at least one being discontinuous (Abstract, Column 2 Lines 19-22) comprising indium, tin, copper, lead or aluminum (Column 5 Lines 1-4).

Since Blonder teaches the same composition as claimed, one of ordinary skill in the art at the time the invention was made would have expected that the change in refractive index in response to incident light of the Blonder composition would inherently be the same as claimed.

Where applicant claims a composition in terms of a function, property or characteristic and the composition of the prior art is the same as that of the claim but the function is not explicitly disclosed by the reference, the examiner may make a rejection under both 35 U.S.C. 102 and 103. "There is nothing inconsistent in concurrent rejections for obviousness under 35 U.S.C. 103 and for anticipation under 35 U.S.C. 102." *In re Best*, 562 F.2d 1252, 1255 n.4, 195 USPQ 430, 433 n.4 (CCPA 1977).

21. Claim 4 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Drozdyk.

Drozdyk teaches a dispersion of dielectric glass, inorganic filler—including Al_2O_3 —and cobalt oxide—both CoO and Co_3O_4 dispersed in an organic medium (Abstract, Column 1 Lines 14-17, Lines 47-57 and Column 1 Line 61 – Column 2 Line

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22), wherein the amount of cobalt oxide in the mixture of oxides ranges from 0 to 5.76 weight percent (Table 2 Column 6 Lines 35-49).

Drozdyk does not disclose expressly the amount of cobalt oxide in the mixture of oxides ranging from 60 to 95 weight percent.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to increase the amount of cobalt oxide in the Drozdyk composition to the claimed, for the purpose of increasing the absorption of 1.06 μm light without altering the electrical properties of the dielectric (Drozdyk Column 2 Lines 13-17), since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering optimum or workable ranges involves only ordinary skill in the art. In re Aller, 105 USPQ 233.

Conclusion

22. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 3,723,144	03-1973	Flannery et al.
US 4,933,659	07-1990	Imai et al.
US 5,104,761	04-1992	Saha et al.

23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J. Kugel whose telephone number is (571) 272-1460. The examiner can normally be reached 6:00 AM – 4:30 PM Monday - Thursday.

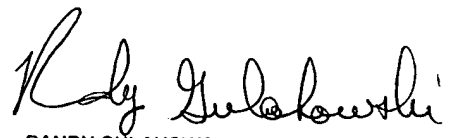
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

24. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TJK
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